

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
19 April 2007 (19.04.2007)

PCT

(10) International Publication Number
WO 2007/042040 A3

(51) International Patent Classification:
A61K 38/18 (2006.01) A61P 27/02 (2006.01)

(21) International Application Number:
PCT/DK2006/000572

(22) International Filing Date: 10 October 2006 (10.10.2006)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
PA 2005 01423 11 October 2005 (11.10.2005) DK

(71) Applicant (for all designated States except US): NS GENE
A/S [DK/DK]; Baltorpevej 154, DK-2750 Ballerup (DK).

(72) Inventor; and

(75) Inventor/Applicant (for US only): JØRGENSEN, Jes-
per, Roland [DK/DK]; Mariendalsvej 73, 2. tv., DK-2000
Frederiksberg C (DK).

(74) Agent: TIDEMAN OLSEN, Camilla Kim; NsGene A/S,
Baltorpevej, 154, DK-2750 Ballerup (DK).

(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,
GB, GD, GE, GH, GM, HN, HR, HU, ID, IL, IN, IS, JP,
KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT,
LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ,
NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU,
SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR,
TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every
kind of regional protection available): ARIPO (BW, GH,
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,
FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT,
RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA,
GN, GQ, GW, ML, MR, NE, SN, TD, TG).

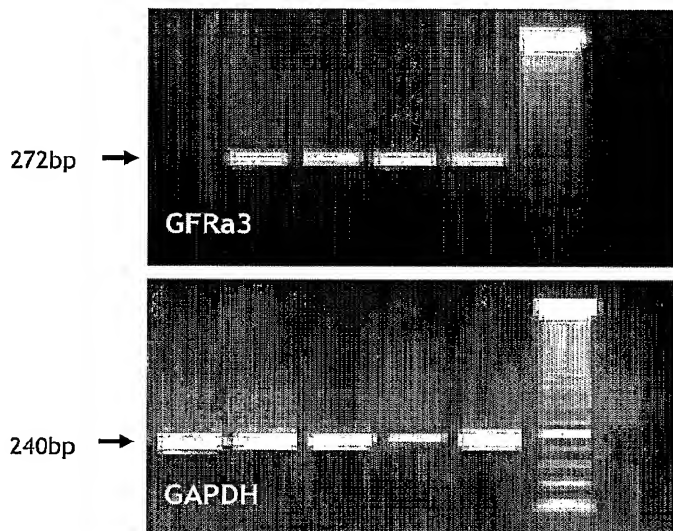
Declaration under Rule 4.17:

— of inventorship (Rule 4.17(iv))

[Continued on next page]

(54) Title: TREATMENT OF RETINOPATHIES USING GFR α 3 AGONISTS

Cornea
Dorsal root ganglion
Retina
Universal Ref control (st-3)
Universal Ref control (st-5)
50bp ladder
H₂O



(57) Abstract: The present invention relates to the
use of GFR α 3 agonists for the treatment of disor-
ders of the retina. A preferred GFR α 3 agonist is
Neublastin. Neublastin may be administered to the
eye using protein formulations, in vivo or ex vivo
gene therapy, or implantation of encapsulated cells
delivering Neublastin locally to the retina.

WO 2007/042040 A3



Published:

- *with international search report*
- *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(88) Date of publication of the international search report:

28 June 2007

INTERNATIONAL SEARCH REPORT

International application No

PCT/DK2006/000572

A. CLASSIFICATION OF SUBJECT MATTER
 INV. A61K38/18 A61P27/02

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

A61K A61P

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, Sequence Search, WPI Data, EMBASE, BIOSIS

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 2004/108760 A (NSGENE AS [DK]; BIOGEN IDEC MA INC [US]; WAHLBERG LARS U [DK]; GROENBO) 16 December 2004 (2004-12-16) abstract; sequences 19,20 page 28, line 22 - line 25 page 45, line 12 - line 21; claim 34	1-47
A	WO 2004/094592 A (BIOGEN IDEC MA INC [US]; SAH DINAH WEN-YEE [US]; PEPINSKY BLAKE R [US]) 4 November 2004 (2004-11-04) abstract; claims 6,12	1-47

☐ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

* Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *&* document member of the same patent family

Date of the actual completion of the international search

25 April 2007

Date of mailing of the international search report

07/05/2007

Name and mailing address of the ISA/
 European Patent Office, P.B. 5818 Patentlaan 2
 NL - 2280 HV Rijswijk
 Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
 Fax: (+31-70) 340-3016

Authorized officer

Vandenbogaerde, Ann

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/DK2006/000572

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 2004108760 A	16-12-2004	AU 2004245175 A1 CA 2527914 A1 EP 1636260 A2 KR 20060031618 A	16-12-2004 16-12-2004 22-03-2006 12-04-2006
WO 2004094592 A	04-11-2004	AU 2004233079 A1 CA 2522364 A1 EP 1618179 A2 JP 2006523709 T	04-11-2004 04-11-2004 25-01-2006 19-10-2006